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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/512,015	07/28/2005	Roger Aki Fujimoto	ON/4-32467A	8465

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EXAMINER	
PACKARD, BENJAMIN J	
ART UNIT	**PAPER NUMBER**
1609	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/512,015	FUJIMOTO ET AL.	
	Examiner	Art Unit	
	Benjamin J. Packard	1609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-10 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-10 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Written Description

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 refers to a COX-2 inhibitor without structure, but only functional language. The specification teaches that "certain COX-2 inhibitors, in particular 5-alkyl substituted 2- arylaminophenylacetic acid derivative COX-2 inhibitors, have desirable properties for use in the treatment of Cancer pain, in particular bone cancer pain." (Spec pg 1 para 3). The specification then defines suitable COX-2 inhibitors, including rofecoxib, etoricoxib, celecoxib, valdecoxib, parecoxib, or a 5-alkyl-2- arylaminophenylacetic acid derivative COX-2 inhibitor. (Spec pg 1 para 5). Clearly, the specification shows some COX-2 inhibitors, but fails to provide enablement that extend beyond the COX-2 inhibitors of formula I in claim 2, specifically of 5-methyl-2-(2'-chloro-6'-fluoroanilino)phenylacetic acid. Nor does the written description provide support for COX-2 inhibitors generally.

Additionally, the term "treating" in claim 1 is defined by the applicant in the specification as "prophylactic or preventative treatment." (spec pg 3 lines 8-9). The ability to prevent cancer pain is broader than just preventing pain, but may reasonably be read to prevent cancer. It is known in the art that cancer is hard to treat and prevention methods are unpredictable, such a broad reading of the term is not enabling because there is no written support that shows a COX-2 inhibitor might prevent cancer.

Enablement

Claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for some of the COX-2 inhbitors of formula I in claim 2, does not reasonably provide enablement for the generic COX-2 inhibitor of claim 1. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

The factors to be considered in determining whether a disclosure meets the enablement requirement of 35 U.S.C. 112, first paragraph, have been described in In re Wands, 8 USPQ2d 1400 (Fed. Cir. 1988). Among these factors are: (1) the nature of the invention; (2) the state of prior art; (3) the relative skill of those in the art; (4) the predictability or unpredictability of the art; (5) the breadth of the claims; (6) the amount of direction or guidance presented; (7) the presence or absence of working examples; and (8) the quantity or experimentation necessary. When the above factors are weighed, it is the examiner's position that one skilled in the art could not practice the invention without undue experimentation.

There is a lack of predictability in the art. There is no teaching as to how the claimed compound(s) will prevent cancer pain. Neither can the method of use as claimed be predicted.

The "predictability or lack thereof" in the art refers to the ability of one skilled in the art to extrapolate the disclosed or known results to the claimed invention. If one skilled in the art can readily anticipate the effect of a change within the subject matter to which the claimed invention pertains, then there is predictability in the art. On the other hand, if one skilled in the art cannot readily anticipate the effect of a change within the subject matter to which that claimed invention pertains, then there is lack of predictability in the art. Accordingly, what is known in the art provides evidence as to the question of predictability. In particular, the court in *In re Marzocchi*, 439 F.2d 220, 223-24, 169 USPQ 367, 369-70 (CCPA 1971), stated:

[I]n the field of chemistry generally, there may be times when the well-known unpredictability of chemical reactions will alone be enough to create a reasonable doubt as to the accuracy of a particular broad statement put forward as enabling support for a claim. This will especially be the case where the statement is, on its face, contrary to generally accepted scientific principles. Most often, additional factors, such as the teachings in pertinent references, will be available to substantiate any doubts that the asserted scope of objective enablement is in fact commensurate with the scope of protection sought and to support any demands based thereon for proof.

The scope of the required enablement varies inversely with the degree of predictability involved, but even in unpredictable arts, a disclosure of every operable species is not required. A single embodiment may provide broad enablement in cases involving predictable factors, such as mechanical or electrical elements. *In re Vickers*, 141 F.2d 522, 526-27, 61 USPQ 122, 127 (CCPA 1944); *In re Cook*, 439 F.2d 730, 734, 169 USPQ 298, 301 (CCPA 1971). However, in applications directed to inventions in arts where the results are unpredictable, the disclosure of a single species usually does not provide an adequate basis to support generic claims. *In re Soll*, 97 F.2d 623, 624, 38 USPQ 189, 191 (CCPA 1938). In cases involving unpredictable factors, such as most chemical reactions and physiological activity, more may be required. *In re Fisher*, 427 F.2d 833, 839, 166 USPQ 18, 24 (CCPA 1970) (contrasting mechanical and electrical elements with chemical reactions and physiological activity). See also *In re Wright*, 999 F.2d 1557, 1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993); *In re Vaeck*, 947 F.2d 488, 496, 20 USPQ2d 1438, 1445 (Fed. Cir. 1991). This is because it is not obvious from the disclosure of one species, what other species will work. See MPEP 2164.03.

The amount of direction or guidance presented

The amount of guidance or direction needed to enable the invention is inversely related to the amount of knowledge in the state of the art as well as the predictability in the art. *In re Fisher*, 427 F.2d 833, 839, 166 USPQ 18, 24 (CCPA 1970). The "amount of guidance or direction" refers to that information in the application, as originally filed, that teaches exactly how to make or use the invention. The more that is known in the

prior art about the nature of the invention, how to make, and how to use the invention, and the more predictable the art is, the less information needs to be explicitly stated in the specification. In contrast, if little is known in the prior art about the nature of the invention and the art is unpredictable, the specification would need more detail as to how to make and use the invention in order to be enabling. >See, e.g., *Chiron Corp. v. Genentech Inc.*, 363 F.3d 1247, 1254, 70 USPQ2d 1321, 1326 (Fed. Cir. 2004) ("Nascent technology, however, must be enabled with a 'specific and useful teaching.' The law requires an enabling disclosure for nascent technology because a person of ordinary skill in the art has little or no knowledge independent from the patentee's instruction. Thus, the public's end of the bargain struck by the patent system is a full enabling disclosure of the claimed technology."

The presence or absence of working examples

In present case there are no examples and/or data for the prevention of cancer pain. A disclosure should contain representative examples, which provide reasonable assurance to one skilled in the art that the compounds fall within the scope of a claim will possess the alleged activity. See In re Riat et al. (CCPA 1964) 327 F2d 685, 140 USPQ 471; In re Barr et al. (CCPA 1971) 444 F 2d 349, 151 USPQ 724. Test data was provided for the compound 5-methyl-2-2'-chloro-6'-fluoroanilino)-phenylacetic acid where the compound was tested on adult female rats given intra-tibial injections of MRMT-1 rat mammary gland carcinoma cells. (Spec pg 15, lines 21-22). The experiment consisted of a rat with carcinoma cells tested for cancer pain, but the

experiment failed to provide support for the full definition of "treating" as defined by the applicant. According to the specification, the term "treat" cancer pain is defined by the inventor as "prophylactic or preventative treatment." (spec pg 3 lines 8-9).

The quantity of experimentation necessary

Since there is no guidance and/or direction provided by the Applicants for the prevention of cancer pain, one skilled in the art would have to go through undue experimentation to make and/or use the instant invention. In this case, one skilled in the art would have to device a new experiment to determine if the application of this composition actually prevented cancer pain, rather than just treating it. Additionally, the data does not provide enablement for any other variation of the compound. (Spec pg 15, lines 21-22). The experimentation would have to be substantial to test all the varieties of drugs claimed by applicant.

The first paragraph of 35 USC 112 requires "*...such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains...*" The instant invention fails to meet this requirement, as it lacks such full, clear, and concise manner as to enable any person skilled in the art to which it pertains to make and/or use the invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3-4 and 6-8 provides for the use of Compound of Formula I, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 3-4 and 6-8 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd.* v. *Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Note, in order to provide a complete office action, the use claims will be interpreted as method claim where the term "Use" is applied.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by SEARLE (WO 00/32189). It anticipates:

A method of treating cancer pain in a subject in need of such treatment (used for treating "the pain resulting from cancers." (pg 9, lines 30-32))

which comprises administering to the subject an effective amount of a COX-2 inhibitor (compound which is a "effective cyclooxygenase-2 inhibition" (pg 5, lines 19-21).

Claims 1-6, 8 are rejected under 35 U.S.C. 102(a) as being anticipated by BATEMAN (WO 02/20090). It anticipates the use of 5-methyl-2-(2'-chloro-6'-fluoroanilino)phenylacetic acid for use as treatment of pain, including ailments such as colon cancer. (pg 8, lines 5-11). Further it advises the application of the medicine by use of oral compositions or as injectable compositions. (pg 4, lines 17-18).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over CARTER (US 6,271,253) in light of BATEMAN.

The claim is drawn to methods of using a COX-2 inhibitor to treat bone cancer pain.

CARTER teaches using a COX-2 inhibitor (pg 168 lines 49-50) for treating, among other pains, pain resulting from cancer. (pg 6 lines 26-28).

Additionally, BATEMAN teaches of 5-methyl-2-(2'-chloro-6'-fluoroanilino)phenylacetic acid can be used when a COX-2 inhibitor is required for treatment. (pg 1 lines 6-11).

It would have been obvious to one having ordinary skill in the art, relying on CARTER, to treat bone cancer pain, a form of pain from a cancer, with a COX-2 inhibitor. Knowing that BATEMAN then teaches a specific compound as a COX-2 inhibitor, one having ordinary skill in the art would then expect the compound of BATEMAN to work in treating bone cancer, which will also reduce the pain associated with the bone cancer. It would also be within the scope of the artisan to select any pharmaceutical acceptable salt.

Claims 9-10 is rejected under 35 U.S.C. 103(a) as being unpatentable over BAYLY (US 5994379) in light of BATEMAN.

The claims are drawn to methods of using a COX-2 inhibitor of formula I in Claim 2 to inhibit bone loss.

BAYLY teaches the use of a COX-2 inhibitor (pg 1 lines 31-35) for the treating bone loss (pg 9 lines 31-34).

BATEMAN teaches of 5-methyl-2-(2'-chloro-6'-fluoroanilino)phenylacetic acid can be used when a COX-2 inhibitor is required for treatment. (pg 1 lines 6-11).

It would have been obvious to one having ordinary skill in the art, relying on BAYLY, to inhibit bone loss with a COX-2 inhibitor. Knowing that BATEMAN then teaches a specific compound as a COX-2 inhibitor, one having ordinary skill in the art

would then expect the compound of BATEMAN to work for inhibiting bone loss. It would also be within the scope of the artisan to select any pharmaceutical acceptable salt.

Conclusion

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin J. Packard whose telephone number is 571-270-3440. The examiner can normally be reached on M-R 9-4:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin H. Marschel can be reached on 571-272-0718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

16 July 2007
BP

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